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CONTRACTING ORGANIZATION: University of Iowa  
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14. ABSTRACT  The HBCU Summer Research Training Program accepted six students from Lincoln University for the eight week session in the summer of 2006. Five of the students were supported by the DOD grant and an additional student was supported by a collaborating faculty member at the University of Iowa. Each student was assigned to a laboratory of a participating mentor and also paired with a member of the mentor's laboratory. This laboratory member assisted with day to day aspects of the research project. During the summer the students worked diligently on their research project, participated in meetings of the mentor's laboratory, attended workshops and seminars associated with our and other summer programs, and attended a special course in prostate cancer. We integrated the Lincoln students into social programs held throughout the campus for summer interns and they attended and participated in the CIC Conference at the University of Illinois. At the end of the summer session the students presented a poster of the research results from the summer experience. They also presented the results of their research in the fall at Lincoln University and many presented at a national meeting in Florida during the fall/winter of 2006. All of the students have applied to graduate programs for the fall of 2007.					
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## **Introduction**

In the original application we proposed to recruit and train 5 students per year from Lincoln University, an HBCU institution, at the University of Iowa. Participants in the proposed program were David Lubaroff, PhD, the Principal Investigator and a mentor, Paul Heidger, PhD, the University of Iowa Faculty Advisor; John Chikwem, PhD, the Lincoln University Faculty Advisor, and the following mentors: Elizabeth Chrischilles, PhD, Michael Cohen, MD, Frederick Domann, PhD, Thomas Griffith, PhD, Michael Henry, PhD; Douglas Spitz, PhD, and Nicholas Zavazava, MD. The review committee for the grant application criticized the choice of Dr. Chikwem who is also the Dean of Science and Mathematics at Lincoln. We therefore made a change and chose Derrick Swinton, PhD, Assistant Professor of Analytical Chemistry as the new Faculty Advisor at Lincoln.

## **Body**

### **Recruitment and Admission:**

Immediately after the initiation of the award in January 2006 we began our recruitment. The PI traveled to Lincoln University on March 20, 2006, met with Dr. Swinton, Dr. Chikwem, Dr. Renford Brevett in the Department of Sponsored Programs, and Chairmen of the Biology and Chemistry Departments. Dr. Lubaroff presented the summer training program to a group of 30 interested students and distributed program brochures and applications. Eleven applications were received and reviewed by the Admissions Committee whose membership included Dr. Lubaroff, Dr. Heidger, Dr. Henry, and Dr. Swinton. Five extremely qualified students were accepted into the program for 2006 and an additional Lincoln University student from the applicant pool was accepted and supported by funds from a collaborating University of Iowa faculty member.

#### Accepted Students:

Oluwaseun Adekunle  
Shaynah Browne  
Nikesha Haynes  
Shivaughn Johnson  
Briquel Sherman  
Shaan Spence

### **Advance Preparation and Information Distribution:**

Following acceptance of the students into the program we assigned each student a mentor based upon his/her choices listed in their applications. Each mentor then assigned a member of the lab as a “big brother/big sister,” a person that will partner with the student during the 8 week summer session. The mentor also prepared a portfolio of articles covering the area of research the student would be working on, including published papers by the mentor. These materials were sent to the students in advance of their arrival at the University of Iowa.

A six week course on Prostate Cancer was organized with six faculty assigned to deliver lectures. The following represents the course schedule with lecturers:

**Iowa-Lincoln Summer Research Training Program  
Prostate Cancer Course  
Room 3240 MERF**

Lecture	Date	Time	Subject	Lecturer
Week 1	June 19	4:00 pm	Introduction to cancer	Douglas Spitz
Week 2	June 20	9:00 am	Basic aspects of prostate cancer	Michael Cohen
Week 3	June 27	9:00 am	Epidemiology of prostate cancer	Leslie Dennis
Week 4	July 6	9:00 am	Genetics of prostate cancer	Frederick Domann
Week 5	July 11	9:00 am	Clinical treatment of prostate cancer	Richard Williams
Week 6	July 18	9:00 am	Immunotherapy of prostate cancer	David Lubaroff

Housing and meal plans were arranged in collaboration with the Iowa Biosciences Advantage Program (IBA). Lincoln students were paired with IBA students in the dormitory. Plans were also formulated to integrate workshops, lectures, and social events with other programs dedicated to the training of minority students, such as the Iowa Alliance for Graduate Education and Professiorate (AGEP), CIC Iowa Summer Research Opportunities Program (SROP), and Iowa Biosciences Advantage (IBA) Program.

Program web sites:

IBA: <http://www.uiowa.edu/iba>

AGEP: <http://www.agep.iastate.edu>

SROP: <http://www.grad.uiowa.edu/students/SROP>

**The Summer Program:**

A welcoming summer picnic was held on the day of the student's arrival in Iowa City in conjunction with the other summer programs at the University of Iowa. The following day the students wet with the PI for an orientation and then taken to the laboratory of their mentors to begin the summer research training program.

During the 8 week session each student worked diligently with his/her mentor and lab partner on the assigned research project. Each student had an independent project. They attended seminars, workshops, lab meetings, journal clubs and the weekly lectures in the program's prostate cancer course (see schedule above). During the seventh week the PI met individually with each student to evaluate his/her summer experience. The unanimous opinion was that the program was a success. The students indicated that they learned much about research, about prostate cancer, and about the advantages of a research career. At the end of the summer session each student presented their research as part of a poster session held during an afternoon of the last week. One student, Nikesha Haynes, did not present a poster as she had to leave the program a little early, but she summarized her research at a lab meeting as an oral presentation. A page of photographs taken during the Iowa poster session is included in this annual report. In addition to the mentoring the students received from their research lab and the PI, they received career counseling. We discussed the options for each of them based upon their experience and their desire for the type of future they envisioned for themselves. Among the topics discussed was graduate school versus medical school, their ultimate goals of research, patient care, and/or teaching.

**Follow-Up:**

We made frequent contact with all of the students after their departure from the University of Iowa. The mentors, faculty advisors (Heidger and Swinton), and mentors, all had contact with the students since the end of the 2006 summer session. Many of the mentors were asked to write letters of reference for the students' applications to graduate schools. As of the date of this report, five of the six have applied to graduate programs, three of them applying to the University of Iowa's Biosciences Graduate Program. In February 2007 the PI made a second visit to Lincoln University to recruit students for the upcoming summer program. During the presentations to Lincoln students four of the 2006 students spoke of their experiences at Iowa and encouraged their underclass colleagues to apply for the 2007 session. The PI also met with the 2006 students to further assist them with career planning.

**Key Research Accomplishments**

Each of the students worked on research projects that were part of an overall program within the laboratory of their mentors. As such, it is difficult to identify key research accomplishments for each student research project. Continuation of the research program by each mentor will certainly produce important research findings, aided in part by the summer research of the Lincoln University students. What is key is the mentoring and counseling of the students to aid in their future as scientists in the area of prostate cancer research. The high percentage of the 2006 students that have applied to graduate programs is an outstanding accomplishment as these future scientists will most certainly provide key research accomplishments in the years to come.

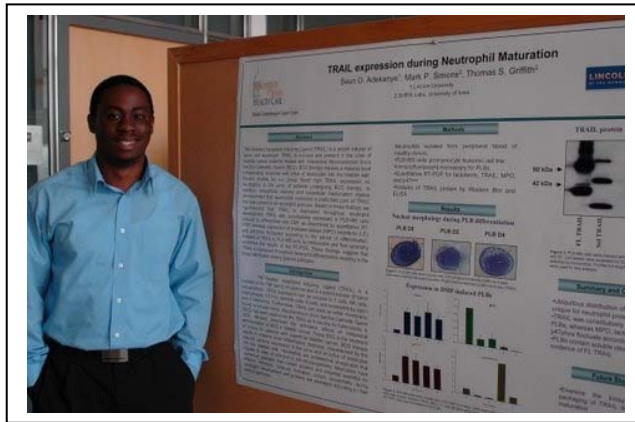
**Reportable Outcomes:**

Although the students have not produced any publications from their 8 week research program, they have reported their findings to the University of Iowa faculty, to the faculty and students at Lincoln University, and at some at national competitions and conferences.

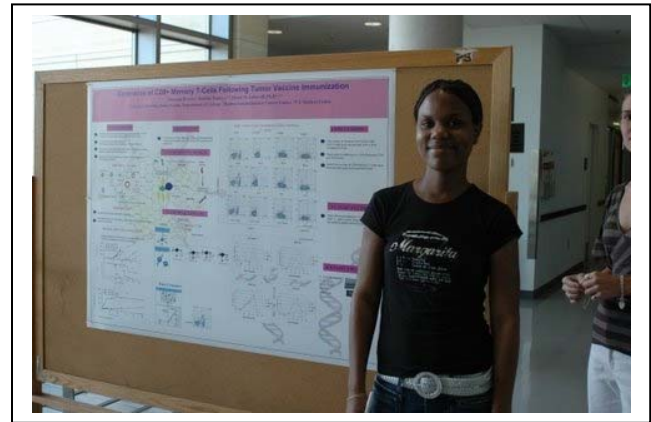
**Conclusion**

The first year of this award was highly successful as evidenced by the amount of work accomplished by each student and by their motivation to continue in a science career. Thus far, 5 of the 6 students have applied to graduate programs. The PI applied, and received funding, for a second HBCU training grant that will enable us to accept additional students for the next 3 years, thus increasing the number of African American scientists in the area of prostate cancer.

# **Appendix** **Iowa/Lincoln Summer Research Training Program – 2006** **Poster Session**



Aluwaseun Adekanye



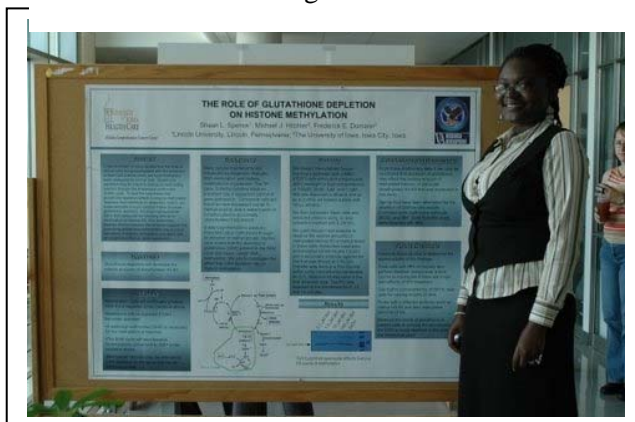
Shaynah Browne



Shivaughn Johnson



Briquel Sherman



Shaan Spence

Not pictured – Nikesha Haynes